K. Kerr

RAW SEQUENCE LISTING DATE: 04/30/2001
PATENT APPLICATION: US/09/668,021 TIME: 14:17:32

Input Set : N:\Crf3\RULE60\09668021.txt
Output Set: N:\CRF3\04302001\I668021.raw

<110> APPLICANT: Brunkow, Mary E.
Galas, David J.
Kovacevich, Brian
Mulligan, John T.
Paeper, Bryan W.
Van Ness, Jeffrey
Winkler, David G.
<120> TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR INCREASING BONE MINERALIZATION
<130> FILE REFERENCE: 240083.508
<140> CURRENT APPLICATION NUMBER: 09/668,021
<141> CURRENT FILING DATE: 2000-09-21
<150> PRIOR APPLICATION NUMBER: 09/449,218
<151> PRIOR FILING DATE: 1999-11-24
<160> NUMBER OF SEQ ID NOS: 41
<170> SOFTWARE: FastSEQ for Windows Version 3.0
<210> SEQ ID NO: 1
<211> LENGTH: 2301
<212> TYPE: DNA
<213> ORGANISM: Homo sapien
<400> SEQUENCE: 1

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ggtggcaggc gttcaagaat gatgccacgg aaatcatccc cgagctcgga gagtaccccg 180
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caactgtaga tgtggtttct agtcctggct ctgccactaa cttgctgtgt aaccttgaac 1200
tacacaattc tccttcggga cctcaatttc cactttgtaa aatgagggtg gaggtgggaa 1260
taggatctcg aggagactat tggcatatga ttccaaggac tccagtgcct tttgaatggg 1320
cagaggtgag agagagagag agaaagagag agaatgaatg cagttgcatt gattcagtgc 1380
caaggtcact tccagaattc agagttgtga tgctctcttc tgacagccaa agatgaaaaa 1440
caaacagaaa aaaaaaagta aagagtctat ttatggctga catatttacg gctgacaaac 1500
tcctggaaga agctatgctg cttcccagcc tggcttcccc ggatgtttgg ctacctccac 1560

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PATENT APPLICATION: US/09/668,021 TIME: 14:17:32

Input Set : N:\Crf3\RULE60\09668021.txt
Output Set: N:\CRF3\04302001\I668021.raw

ccctccatct caaagaaata acatcatcca ttggggtaga aaaggagagg gtccgagggt 1620
ggtgggaggg atagaaatca catccgcccc aacttcccaa agagcagcat ccctcccccg 1680
acccatagcc atgttttaaa gtcaccttcc gaagagaagt gaaaggttca aggacactgg 1740
ccttgcaggc ccgagggagc agccatcaca aactcacaga ccagcacatc ccttttgaga 1800
caccgccttc tgcccaccac tcacggacac atttctgcct agaaaacagc ttcttactgc 1860
tcttacatgt gatggcatat cttacactaa aagaatatta ttgggggaaa aactacaagt 1920
gctgtacata tgctgagaaa ctgcagagca taatagctgc cacccaaaaa tctttttgaa 1980
aatcatttcc agacaacctc ttactttctg tgtagttttt aattgttaaa aaaaaaaagt 2040
tttaaacaga agcacatgac atatgaaagc ctgcaggact ggtcgttttt ttggcaattc 2100
ttccacgtgg gacttgtcca caagaatgaa agtagtggtt tttaaagagt taagttacat 2160
atttattttc tcacttaagt tatttatgca aaagtttttc ttgtagagaa tgacaatgtt 2220
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acaatgaatc atgaccgaaa g 2301

<210> SEQ ID NO: 2
<211> LENGTH: 213
<212> TYPE: PRT
<213> ORGANISM: Homo sapien
<400> SEQUENCE: 2

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            20                  25                  30
Ala Thr Glu Ile Ile Pro Glu Leu Gly Glu Tyr Pro Glu Pro Pro Pro
        35                  40                  45
Glu Leu Glu Asn Asn Lys Thr Met Asn Arg Ala Glu Asn Gly Gly Arg
    50                  55                  60
Pro Pro His His Pro Phe Glu Thr Lys Asp Val Ser Glu Tyr Ser Cys
65                  70                  75                  80
Arg Glu Leu His Phe Thr Arg Tyr Val Thr Asp Gly Pro Cys Arg Ser
                85                  90                  95
Ala Lys Pro Val Thr Glu Leu Val Cys Ser Gly Gln Cys Gly Pro Ala
            100                 105                 110
Arg Leu Leu Pro Asn Ala Ile Gly Arg Gly Lys Trp Trp Arg Pro Ser
        115                 120                 125
Gly Pro Asp Phe Arg Cys Ile Pro Asp Arg Tyr Arg Ala Gln Arg Val
    130                 135                 140
Gln Leu Leu Cys Pro Gly Gly Glu Ala Pro Arg Ala Arg Lys Val Arg
145                 150                 155                 160
Leu Val Ala Ser Cys Lys Cys Lys Arg Leu Thr Arg Phe His Asn Gln
                165                 170                 175
Ser Glu Leu Lys Asp Phe Gly Thr Glu Ala Ala Arg Pro Gln Lys Gly
            180                 185                 190
Arg Lys Pro Arg Pro Arg Ala Arg Ser Ala Lys Ala Asn Gln Ala Glu
        195                 200                 205
Leu Glu Asn Ala Tyr
    210
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<210> SEQ ID NO: 3
<211> LENGTH: 2301
<212> TYPE: DNA

RAW SEQUENCE LISTING DATE: 04/30/2001
PATENT APPLICATION: US/09/668,021 TIME: 14:17:32

Input Set : N:\Crf3\RULE60\09668021.txt
Output Set: N:\CRF3\04302001\I668021.raw

<213> ORGANISM: Homo sapien
<400> SEQUENCE: 3

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ggtggcaggc gttcaagaat gatgccacgg aaatcatccc cgagctcgga gagtaccccg     180
agcctccacc ggagctggag aacaacaaga ccatgaaccg ggcggagaac ggagggcggc     240
ctccccacca ccccttttgag accaaagacg tgtccgagta cagctgccgc gagctgcact     300
tcacccgcta cgtgaccgat gggccgtgcc gcagcgccaa gccggtcacc gagctggtgt     360
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ggcgacctag tgggcccgac ttccgctgca tccccgaccg ctaccgcgcg cagcgcgtgc     480
agctgctgtg tcccggtggt gaggcgccgc gcgcgcgcaa ggtgcgcctg gtggcctcgt     540
gcaagtgcaa gcgcctcacc cgcttccaca accagtcgga gctcaaggac ttcgggaccg     600
aggccgctcg gccgcagaag ggccggaagc cgcggccccg cgcccggagc gccaaagcca     660
accaggccga gctggagaac gcctactaga gcccgcccgc gcccctcccc accggcgggc     720
gccccggccc tgaacccgcg ccccacattt ctgtcctctg cgcgtggttt gattgtttat     780
atttcattgt aaatgcctgc aacccagggc aggggggctga gaccttccag gccctgagga     840
atcccgggcg ccggcaaggc ccccctcagc ccgccagctg aggggtccca cggggcaggg     900
gagggaattg agagtcacag acactgagcc acgcagcccc gcctctgggg ccgcctacct     960
ttgctggtcc cacttcagag gaggcagaaa tggaagcatt ttcaccgccc tggggtttta    1020
agggagcggt gtgggagtgg gaaagtccag ggactggtta agaaagttgg ataagattcc    1080
cccttgcacc tcgctgccca tcagaaagcc tgaggcgtgc ccagagcaca agactggggg    1140
caactgtaga tgtggtttct agtcctggct ctgccactaa cttgctgtgt aaccttgaac    1200
tacacaattc tccttcggga cctcaatttc cactttgtaa aatgagggtg gaggtgggaa    1260
taggatctcg aggagactat tggcatatga ttccaaggac tccagtgcct tttgaatggg    1320
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caaggtcact tccagaattc agagttgtga tgctctcttc tgacagccaa agatgaaaaa    1440
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tcctggaaga agctatgctg cttcccagcc tggcttcccc ggatgtttgg ctacctccac    1560
ccctccatct caaagaaata acatcatcca ttggggtaga aaaggagagg gtccgagggt    1620
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ccttgcaggc ccgagggagc agccatcaca aactcacaga ccagcacatc ccttttgaga    1800
caccgccttc tgcccaccac tcacggacac atttctgcct agaaaacagc ttcttactgc    1860
tcttacatgt gatggcatat cttacactaa aagaatatta ttgggggaaa aactacaagt    1920
gctgtacata tgctgagaaa ctgcagagca taatagctgc cacccaaaaa tctttttgaa    1980
aatcatttcc agacaacctc ttactttctg tgtagttttt aattgttaaa aaaaaaaagt    2040
tttaaacaga agcacatgac atatgaaagc ctgcaggact ggtcgttttt ttggcaattc    2100
ttccacgtgg gacttgtcca caagaatgaa agtagtggtt tttaaagagt taagttacat    2160
atttattttc tcacttaagt tatttatgca aaagtttttc ttgtagagaa tgacaatgtt    2220
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acaatgaatc atgaccgaaa g                                              2301
```

<210> SEQ ID NO: 4
<211> LENGTH: 23
<212> TYPE: PRT
<213> ORGANISM: Homo sapien
<400> SEQUENCE: 4

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RAW SEQUENCE LISTING DATE: 04/30/2001
PATENT APPLICATION: US/09/668,021 TIME: 14:17:32

Input Set : N:\Crf3\RULE60\09668021.txt
Output Set: N:\CRF3\04302001\I668021.raw

165 20
167 <210> SEQ ID NO: 5
168 <211> LENGTH: 2301
169 <212> TYPE: DNA
170 <213> ORGANISM: Homo sapien
172 <400> SEQUENCE: 5
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175 ggtggcaggc gttcaagaat gatgccacgg aaatcatccg cgagctcgga gagtaccccg 180
176 agcctccacc ggagctggag aacaacaaga ccatgaaccg ggcggagaac ggagggcggc 240
177 ctccccacca ccccttttgag accaaagacg tgtccgagta cagctgccgc gagctgcact 300
178 tcacccgcta cgtgaccgat gggccgtgcc gcagcgccaa gccggtcacc gagctggtgt 360
179 gctccggcca gtgcggcccg gcgcgcctgc tgcccaacgc catcggccgc ggcaagtggt 420
180 ggcgacctag tgggcccgac ttccgctgca tccccgaccg ctaccgcgcg cagcgcgtgc 480
181 agctgctgtg tcccggtggt gaggcgccgc gcgcgcgcaa ggtgcgcctg gtggcctcgt 540
182 gcaagtgcaa gcgcctcacc cgcttccaca accagtcgga gctcaaggac ttcgggaccg 600
183 aggccgctcg gccgcagaag ggccggaagc cgcggccccg cgcccggagc gccaaagcca 660
184 accaggccga gctggagaac gcctactaga gcccgcccgc gcccctcccc accggcgggc 720
185 gccccggccc tgaacccgcg ccccacattt ctgtcctctg cgcgtggttt gattgtttat 780
186 atttcattgt aaatgcctgc aacccagggc agggggctga gaccttccag gccctgagga 840
187 atcccgggcg ccggcaaggc ccccctcagc ccgccagctg aggggtccca cggggcaggg 900
188 gagggaattg agagtcacag acactgagcc acgcagcccc gcctctgggg ccgcctacct 960
189 ttgctggtcc cacttcagag gaggcagaaa tggaagcatt ttcaccgccc tggggtttta 1020
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191 cccttgcacc tcgctgccca tcagaaagcc tgaggcgtgc ccagagcaca agactggggg 1140
192 caactgtaga tgtggtttct agtcctggct ctgccactaa cttgctgtgt aaccttgaac 1200
193 tacacaattc tccttcggga cctcaatttc cactttgtaa aatgagggtg gaggtgggaa 1260
194 taggatctcg aggagactat tggcatatga ttccaaggac tccagtgcct tttgaatggg 1320
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197 caaacagaaa aaaaaaagta aagagtctat ttatggctga catatttacg gctgacaaac 1500
198 tcctggaaga agctatgctg cttcccagcc tggcttcccc ggatgtttgg ctacctccac 1560
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203 caccgccttc tgcccaccac tcacggacac atttctgcct agaaaacagc ttcttactgc 1860
204 tcttacatgt gatggcatat cttacactaa aagaatatta ttgggggaaa aactacaagt 1920
205 gctgtacata tgctgagaaa ctgcagagca taatagctgc cacccaaaaa tctttttgaa 1980
206 aatcatttcc agacaacctc ttactttctg tgtagttttt aattgttaaa aaaaaaaagt 2040
207 tttaaacaga agcacatgac atatgaaagc ctgcaggact ggtcgttttt ttggcaattc 2100
208 ttccacgtgg gacttgtcca caagaatgaa agtagtggtt tttaaagagt taagttacat 2160
209 atttattttc tcacttaagt tatttatgca aaagtttttc ttgtagagaa tgacaatgtt 2220
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211 acaatgaatc atgaccgaaa g 2301
213 <210> SEQ ID NO: 6
214 <211> LENGTH: 213
215 <212> TYPE: PRT
216 <213> ORGANISM: Homo sapien

RAW SEQUENCE LISTING DATE: 04/30/2001
PATENT APPLICATION: US/09/668,021 TIME: 14:17:32

Input Set : N:\Crf3\RULE60\09668021.txt
Output Set: N:\CRF3\04302001\I668021.raw

<400> SEQUENCE: 6
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Ala Thr Glu Ile Ile Arg Glu Leu Gly Glu Tyr Pro Glu Pro Pro Pro
35 40 45
Glu Leu Glu Asn Asn Lys Thr Met Asn Arg Ala Glu Asn Gly Gly Arg
50 55 60
Pro Pro His His Pro Phe Glu Thr Lys Asp Val Ser Glu Tyr Ser Cys
65 70 75 80
Arg Glu Leu His Phe Thr Arg Tyr Val Thr Asp Gly Pro Cys Arg Ser
85 90 95
Ala Lys Pro Val Thr Glu Leu Val Cys Ser Gly Gln Cys Gly Pro Ala
100 105 110
Arg Leu Leu Pro Asn Ala Ile Gly Arg Gly Lys Trp Trp Arg Pro Ser
115 120 125
Gly Pro Asp Phe Arg Cys Ile Pro Asp Arg Tyr Arg Ala Gln Arg Val
130 135 140
Gln Leu Leu Cys Pro Gly Gly Glu Ala Pro Arg Ala Arg Lys Val Arg
145 150 155 160
Leu Val Ala Ser Cys Lys Cys Lys Arg Leu Thr Arg Phe His Asn Gln
165 170 175
Ser Glu Leu Lys Asp Phe Gly Thr Glu Ala Ala Arg Pro Gln Lys Gly
180 185 190
Arg Lys Pro Arg Pro Arg Ala Arg Ser Ala Lys Ala Asn Gln Ala Glu
195 200 205
Leu Glu Asn Ala Tyr
210

<210> SEQ ID NO: 7
<211> LENGTH: 2301
<212> TYPE: DNA
<213> ORGANISM: Homo sapien
<400> SEQUENCE: 7
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ggtggcaggc gttcaagaat gatgccacgg aaatcatccg cgagctcgga gagtaccccg 180
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ctccccacca ccccttttgag accaaagacg tgtccgagta cagctgccgc gagctgcact 300
tcacccgcta cgtgaccgat gggccgtgcc gcagcgccaa gccggtcacc gagctggtgt 360
gctccggcca gtgcggcccg gcgcgcctgc tgcccaacgc catcggccgc ggcaagtggt 420
ggcgacctag tgggcccgac ttccgctgca tccccgaccg ctaccgcgcg cagcgcgtgc 480
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atttcattgt aaatgcctgc aacccagggc agggggctga gaccttccag gccctgagga 840
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VERIFICATION SUMMARY DATE: 04/30/2001
PATENT APPLICATION: US/09/668,021 TIME: 14:17:33

Input Set : N:\Crf3\RULE60\09668021.txt
Output Set: N:\CRF3\04302001\I668021.raw

L:547 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17

STATISTICS SUMMARY DATE: 04/30/2001
PATENT APPLICATION: **US/09/668,021** TIME: 14:17:33

Input Set : **N:\Crf3\RULE60\09668021.txt**
Output Set: **N:\CRF3\04302001\I668021.raw**

Application Serial Number: US/09/668,021
Alpha or Numeric: Numeric
Application Class:
Application File Date: 09-21-2000
Art Unit:
Software Application: FastSeq
Total Number of Sequences: 41
Total Nucleotides: 57700
Total Amino Acids: 1475
Number of Errors: 0
Number of Warnings: 1
Number of Corrections: 0

MESSAGE SUMMARY

341 W: 1 ((46) "n" or "Xaa" used)